INTERNATIONAL ASSOCIATION FOR TESTING MATERIALS.

AMERICAN SECTION.

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CONTENTS.

PAGE.

SECOND ANNUAL MEETING OF AMERICAN SECTION 54
Members in Attendance 54
First Session, August 15 54
Report of the Secretary 55
Report of the Treasurer 56
Report and Action on the Congress of 1900 56
Miscellaneous Business 57
Steel Plates in Flexure and Tension 58
Inspection Visit, August 15 59
Informal Dinner, August 15 60
Second Session, August 15 60
Report of Committee No. 1 60
Standard Test Pieces for Forgings 61
Discrepancies in Commercial Testing 62
Miscellaneous Business 64
Third Session, August 16 65
Reports of Committees 65
Publication and Research Fund 65
Inspection Visit, August 16 66
MEETING OF EXECUTIVE COMMITTEE, AUGUST 16 67
MEETING OF EXECUTIVE COMMITTEE, OCTOBER 21 67
Subscriptions to Publication and Research Fund 67
Rules of the Executive Committee 68
Plans for the Third Annual Meeting 69
The Exposition Congress of 1900 69
LIST OF NEW MEMBERS 71
ANNOUNCEMENT OF THE PUBLICATION COMMITTEE 72

SECOND ANNUAL MEETING OF THE AMERICAN SECTION.

The Second Annual Meeting of the American Section of the International Association for Testing Materials, took place at Pittsburg, Pa., on August 15 and 16, 1899. Three sessions were held at the rooms of the Engineers' Society of Western Pennsylvania. The following members were in attendance:

American Foundrymen's Association, represented by R. G. G. Moldenke.
American Society of Mechanical Engineers, represented by Gus. C. Henning.
Bethlehem Iron Company, represented by Maunsel White and H. F. J. Porter.
Cambria Steel Company, represented by Geo. E. Thackray.
Carnegie Steel Company, Limited, represented by John McLeod.
Robert A. Carter, Monongahela Iron and Steel Co., Pittsburg, Pa.
James Christie, Pencoyd Iron Works, Pencoyd, Pa.
William K. Hatt, Purdue University, Lafayette, Ind.
Gus. C. Henning, Consulting Engineer, New York, N. Y.
Richard L. Humphrey, Engineer of Tests, Philadelphia, Pa.
Illinois Steel Company, represented by P. E. Carhart.
J. J. Kaylor, Inspecting Engineer, Allegheny, Pa.
J. F. Kinkead, Chicago & N. W. Railway Co., Pittsburg, Pa.
Paul Kreuzpointner, Pa. R. R. Co., Altoona, Pa.
Edgar Marburg, University of Pa., Philadelphia, Pa.
Mansfield Merriman, Lehigh University, South Bethlehem, Pa.
Richard G. G. Moldenke, Consulting Engineer, Pittsburg, Pa.
Frank C. Osborn, Civil Engineer, Cleveland, O.
James M. Porter, Lafayette College, Easton, Pa.
Railroad Gazette, represented by Gus. C. Henning.
Francis S. Rice, Keystone Bridge Works, Aspinwall, Pa.
Herbert A. Schaffer, Vulcanite Cement Works, Phillipsburg, N. J.
Arthur N. Talbot, University of Illinois, Champaign, Ill.
Technischer Verein of New York, represented by P. A. Lange.
Technischer Verein of Pittsburg, represented by P. A. Lange and A. Schotte.
William R. Webster, Civil Engineer, Philadelphia, Pa.
Thomas D. West, Foundry Expert, Sharpsville, Pa.
Max. H. Wickhorst, C. B. & Q. R. R., Aurora, Ill.

There were present a number of visitors, among them representatives of the Carbon Steel Company, and the Coatesville Iron and Steel Company and also officers and members of the Engineers' Society of Western Pennsylvania.

FIRST SESSION.

The meeting was called to order at 10.30 A.M. on Tuesday, August 15, by the chairman, Mansfield Merriman.

The minutes of the First Annual Meeting were approved as printed in Bulletin No. 1.

REPORT OF THE SECRETARY.

The Secretary, Richard L. Humphrey, presented the following report:

Since the formation of the American Section at the meeting held June 16, 1898, at Philadelphia, Pa., the membership has increased from 70 to 128, or about 75 per-cent, with only one resignation.

The total receipts and expenditures from June 16, 1898, to August 15, 1899, have been as follows:

Receipts.

Dues, 1898		$ 6.00
Dues, 1899		281.00
Subscriptions to "Baumaterialienkunde"		10.00
		$297.00

Expenditures.

Secretary's Office:

Postage, telegrams, expressages, etc	$33.24	
Printing history, by-laws, membership blanks, etc	66.05	
Printing Bulletins Nos. 1–2–3	31.25	
		$130.54

By cash, Gus. C. Henning, 10/10/98	$ 3.00	
" " " " " 2/15/99	24.00	
" " " " " 2/16/99	3.00	
" " " " "	108.81	
Credit " " "	3.00	
		141.81
By cash Paul Kreuzpointner		24.65
		$297.00

The Executive Committee has held five meetings since the first annual meeting. At the New York meeting the secretary was authorized to issue a pamphlet to contain a list of the officers and members, the history and by-laws and the American and International Committees. At the meeting held at Bethlehem the Secretary was authorized to issue at regular intervals a bulletin to contain an abstract of the minutes of the meetings of the American Section and its Executive Committee, and other matters of interest to members of the American Section. Three bulletins have been thus far issued.

The Executive Committee, besides making appointments on the various International Committees, has created three American Committees, known as Committees B, C, and D. Many of these committees have organized, mapped out a plan of investigation, and it is expected that they will report at the next annual meeting.

The report of the Secretary was received and placed on file.

Report of the Treasurer.

The Treasurer, Paul Kreuzpointner, presented the following report:

Total receipts		$297.00
Expenditures:		
Secretary	130.54	
By cash International Association	141.81	
Balance on hand	24.65	
		$297.00

The report of the treasurer was accepted and placed on file.

A motion was adopted that the Executive Committee be requested to appoint two auditors to examine the accounts of the secretary and treasurer at the close of the year 1899.

Report and Action on the Congress of 1900.

Mr. Gus C. Henning, American member of the Council of the International Association, presented a report on the proposed Congress at Paris in 1900. The report, after reviewing the circumstances which led up to the invitation extended by the French government to the International Association to hold its next Congress in Paris in 1900, stated that the French government now extended an invitation to the International Association for Testing Materials to participate in the Exposition Congress, as individuals, and was not inclined to allow the Congress of the Association to be held. Mr. Henning in conclusion stated that, in his opinion, if the French government would not permit the Congress of the Association to be held in Paris in 1900, the Congress should not be abandoned, but should be held elsewhere.

Professor Marburg moved that the matter be referred to a committee to be appointed by the chairman. This motion was not adopted.

Mr. McLeod thought the invitation of the French government should be treated as any other invitation, and that the question resolved itself into a question of an acceptance or declination of the invitation. If it was not possible to hold a congress at Paris then he thought it should be held elsewhere and personally he thought Brussels far more preferable than Paris.

Professor Talbot did not see anything in the invitation which would indicate that the proposed congress could not be held as arranged.

Mr. Henning maintained that the halls suitable for holding conventions were under the control of the government, so that without the government's consent it would be impossible to hold the congress at Paris except under the auspices of the authorities of the Paris Exposition.

Mr. McLeod thought that the Exposition Congress would have its own business to transact, and that the International Association should hold its congress in Paris or elsewhere and transact its business.

Mr. Webster endorsed Mr. McLeod's views and requested him to embody them in the form of a motion.

Mr. McLeod then proposed the following resolutions:

Resolved: (1) That it is the sense of the American Section that Resolution Number 2 of the resolutions adopted at the meeting of the International Council held at Paris on May 12-13, 1899; viz., "In case the French authorities should send an invitation to the International Association inviting it to participate at the French Congress, the Association accepts on the condition that the International Association will have a hall at its disposal in order to hold a general session to discuss its own affairs," be endorsed.

Resolved: (2) That in the event of the conditions of Resolution Number 2 not being fulfilled, it is the sense of the American Section that the International Association should hold a congress in 1900 at some place to be selected by the International Council.

Mr. Christie thought no step should be taken to create friction or to increase the friction now existing. He could not see anything in the resolutions under consideration that was objectionable. He thought Brussels a good place to hold the congress since it would be neutral.

Professor Marburg proposed the following amendment which was accepted by Mr. McLeod:

Further that nothing in the foregoing shall be construed as being opposed to the acceptance of any invitation to the members of the International Association that has or may be tendered to the International Association to attend the sessions of the French Congress as individuals.

The resolutions as amended were unanimously adopted.

Miscellaneous Business.

A communication was presented from the Technischer Verein of Pittsburg, stating that Mr. Philip A. Lange had been appointed to represent it at the Pittsburg meeting, with Mr. A. Schotte as a substitute.

A letter was also read from the Technischer Verein of New York, appointing Mr. Philip A. Lange as its official delegate.

Mr. Gus. C. Henning and Dr. Richard G. G. Moldenke presented their credentials as the official representatives of the American Society of Mechanical Engineers and the American Foundrymen's Association respectively.

A letter was presented from the Westinghouse Machine Company extending an invitation to the members and guests of the American Section to visit the company's shops any time that was convenient.

A communication was read from Prof. W. E. Goldsborough, of Purdue University, requesting the appointment of a committee to report on the magnetic properties of iron and steel. On motion the appointment of such a committee was approved.

Letters were read from the city officials of Saratoga, Detroit, and Chicago, inviting the American Section to hold the next annual meeting in these cities.

A letter was read from Robert W. Hunt and Company stating that they considered the date selected for the second annual meeting was a very unfortunate one, since it came at a time when so many people were seeking rest and when the weather at Pittsburg is at the very hottest. The consideration of the place for holding the next annual meeting was postponed.

Comparison of Steel Plates in Flexure and Tension.

Prof. William K. Hatt presented a paper giving the results of comparison of steel plates in flexure and tension. The following is an abstract of the paper; a fuller abstract may be found in the *Railroad Gazette*, of September 8, 1899.

Nine steel bars were rolled at different mills for the writer who had the bars planed off on four sides in order to remove the skin. Strips of material were cut off the side of each bar and these strips were turned down to tension specimens three-quarters of an inch in diameter. The bars themselves, after having been further cut up into other smaller bars, were tested in flexure.

A comparison of the proportional elastic limit, yield point, modulus of elasticity in flexure and tension was made. The summary of results is given in following table, from which it may be seen that the elastic limit in flexure is about one and a half that in tension in case of material of the quality and cross section of these bars.

Table of Average Results.

	Series I.	Series II.	Series III.
Elastic limit flexure	48580	31470	39250
Elastic limit tension	32000	22300	27833[1]
Thickness of bar	1.03 in	1.6 in	1.6–1.4 in
Width of bar	6.5 "	6.1–1.5 "	11.9–7.4 "
Span of bar	28.0 "	52–24.0 "	22.0 "
No. of tests of each kind averaged	4	6	3

The ratio of the yield points of flexure and tension was not different from the ratio of the elastic limits.

[1] This result in Series III is yield point.

The results of the tension tests were compared with the reports from the mill on specimens "cut from bars;" and no important differences in ultimate strength, or per-cent of elongation, were observed,—considerable differences in the value of the yield point were, however, observed. In case of series No. I, II, and III the differences between the laboratory and mill yield point were 1,350, 13,375, and 8,200 lbs. per sq. in., respectively.

Tension tests on strips taken from the interior of and surface of a bar in Series No. II, showed great difference of quality throughout the depth of the plate near the edge.

The explanation of the higher elastic strength in flexure was in the consideration that the material of the "outer fibre" of the surface of a beam in flexure is supported by the material immediately below.

Consequently the natural or tensional elastic limit of the surface outer fibre is postponed. This higher value of the flexural elastic limit is a function of the shape of the cross section and of the material. As the breadth of the beam diminishes and the depth increases, the ratio of the elastic limit in flexure to that in tension will be smaller. In case of hard metals the ratio will be unity. The observations of other experimenters were quoted, confirming these tests.

In case of Series No. III special care was used to determine the modulus of elasticity. For the wide plates of this series the modulus was 29,300,000 in tension and 30,400,000 in flexure, thus indicating the effect of side constraint during the bending of the surface fibres of the bar.

This paper was discussed by Messrs. Christie, Talbot, Marburg, White, Henning, Webster, McLeod, Kreuzpointner, and Hatt.

Mr. McLeod announced the program for the visit to the Edgar Thomson Steel Works, stating that the train left Union Station at 2.15 P.M.

The first session adjourned at 12.30 P.M.

Inspection Visit.

During the afternoon of August 15, many of the members availed themselves of the opportunity of visiting the Edgar Thomson Works of the Carnegie Steel Company located at Bessemer, two miles east of Pittsburg. These works have an annual capacity of 650,000 tons of steel rails and billets and 500,000 tons of castings. The members were shown the entire process of the manufacture of steel rails and billets, from the raw material to the finished product. The Chemical Laboratory and the drop-testing apparatus were also inspected.

Informal Dinner.

The members reassembled at the Monongahela House where an informal dinner was held at 6.30 P.M. Professor Merriman presided. Mr. Henning responded to a toast to Professor L. von Tetmajer, the president of the International Association. Other addresses were made by Messrs. McLeod, H. F. J. Porter, Kreuzpointner, Christie, and Moldenke.

SECOND SESSION.

The second session was called to order at 8.30 P.M. on Wednesday, August 15. There were fifty-three members and visitors present.

The Chairman, Professor Mansfield Merriman, delivered an address on "The Work of the International Association for Testing Materials." This address is printed in Bulletin No. 4, and it may also be found in *Engineering News* of August 17, in *The Railroad Gazette* of August 18, in *The Engineering Record* of August 19, in *Science* of September 22, and in *The Journal of the Franklin Institute* for October, 1899.

Report of Committee No. 1.

Mr. William R. Webster, chairman of the American members of Committee No. 1, on Standard Specifications for Iron and Steel, presented a preliminary report in which he stated that he thought the American Committee would be able to present a final report by the latter part of the present year, and suggested that the next annual meeting might be held in winter or early spring.

He stated that the twenty-one American members of this committee had organized and formed the following subcommittees, to each of which had been assigned the study of a particular group of specifications.

(1) On Bridge and Ship Materials; J. A. L. Waddell, R. W. Hunt & Company, Carnegie Steel Company.

(2) On Building Materials; James Christie, Frank C. Osborn, Professor William H. Burr, Cambria Steel Company, H. B. Seaman.

(3) On Rails; William R. Webster, R. W. Hunt and Company, Cambria Steel Company, Illinois Steel Company, Carnegie Steel Company, Pennsylvania Steel Company.

(4) On Boiler Material; H. V. Wille, Lukens Iron and Steel Company, Illinois Steel Company, Carnegie Steel Company, Central Iron and Steel Company, William R. Webster.

(5) On Axles, Tires, etc.; Bethlehem Iron Company, H. V. Wille, James Christie, Cambria Steel Company, Illinois Steel

Company, R. W. Hunt and Company, Carnegie Steel Company.

(6) On Forgings; Bethlehem Iron Company, H. V. Wille, Frank C. Osborn.

(7) On Castings; William R. Webster, James Christie, R. W. Hunt and Company.

On Wire; Cambria Steel Company.

On motion, the report of Mr. Webster was received and filed.

Standard Test Pieces for Forgings.

Mr. White, chairman of Subcommittee (6) of Committee No. 1, reported that the subcommittee had decided to recommend the adoption of a bar two inches long and one-half inch in diameter, as a standard test piece for forgings. He personally favored this size as being the most satisfactory and yielding the best results.

Mr. Kreuzpointner opposed the recommendation of Mr. White as he had not found the result obtained from the two-inch specimen as reliable as those obtained from the eight-inch specimens. He thought the adoption of a two-inch specimen would be taking a step backward.

Mr. White said the United States government had made the most experiments of any consumer and as a result of its experience it had adopted the two-inch bar; instead of being a step backward it was, in his opinion, the advanced result of experience.

Mr. McLeod stated that his company was interested in the question of the tests of forgings. All tests in his opinion were relative. His experience had been obtained from the tests of two-inch bars; the Pennsylvania R. R. had until recently used two-inch bars. He was strongly in favor of Mr. White's recommendation for a two-inch bar.

Mr. Kreuzpointner stated that he had made in the last eighteen years over 40,000 tests on two-inch specimens and thousands of tests on eight-inch specimens, and he had found that the results of the eight-inch tests were far more satisfactory. He had heard many complaints from manufacturers that the two-inch specimens were entirely too small.

Mr. Webster stated that Mr. Kreuzpointner was apparently mistaken as to the intent of the subcommittee. They recommended the adoption of the two-inch specimen for large forgings.

Mr. McLeod wished to emphasize the fact that it was a mistake to throw away the fifteen years' experience gained on a two-inch specimen by the adoption of an eight-inch specimen.

Dr. Moldenke thought it was a question of adopting the specimen which gave the most satisfactory results irrespective of whether it was based on fifteen years' experience or one.

Mr. H. F. J. Porter stated that the Bethlehem Steel Works received specifications from all over the world, each specification

requiring the test specimens to be of different lengths. He thought, therefore, that it was exceedingly desirable to have a uniform standard adopted and he hoped the American Section would recommend a standard test piece, either a two-inch or an eight-inch specimen, to the International Association.

Mr. Henning favored the eight-inch specimen as furnishing a truer indication of the quality of steel than the two-inch specimen. He maintained that if the committee wished to recommend the adoption of the two-inch specimen they should accompany the recommendation with a detailed description of the methods and apparatus for making the test. The recommendation should also be accompanied with proof that the results obtained from the two-inch specimen were more reliable and desirable than those obtained from the eight-inch specimens. This would be required by the International Association. In fact they would not consider the recommendation without this proof.

Mr. Wickhorst thought the larger the specimen the more representative was the test. It was not, however, practical to obtain an eight-inch specimen from some forgings. A two-inch specimen did not waste as much material as an eight-inch specimen.

The Chair closed the discussion by remarking that one of the objects of the Association was to establish a correct nomenclature for testing. He thought such a nomenclature was highly essential, as there was a confusion of terms in the discussion just closed. Professor Hatt also stated that he had found considerable difficulty, in digesting foreign literature, to find equivalent terms in the English dictionary.

The Chair announced that the question of the next annual meeting was still undecided. Dr. Moldenke moved that the Executive Committee be requested to decide the time and place for the next annual meeting, adopting, if possible, the recommendation of the Chairman of Committee No. 1. The motion was carried.

Discrepancies in Commercial Testing.

Mr. Paul Kreuzpointner read a paper on the discrepancies in commercial tests when the same material was tested on different machines, of which the following is an abstract:

Even allowing for possible differences in the different specimens there is still enough of uncertainty and want of uniformity in results to warrant the conclusion that either the testing machines vary, or the measurements of dimensions are at fault, or the weighing is done carelessly, or the preparation of test pieces is defective. There may also be a combination of these and other factors. I have found that the use of different styles of micrometers at two different places, used by two different operators,

caused rejection of the material in one place and its acceptance in the other, the main cause of such difference being a slight difference in the reading of the micrometers and a too hard screwing up of the micrometer by the operator while measuring the test pieces.

Difference in results of tests of the same coupons of boiler steel, each coupon being thirty-six inches long, one half of which, or a test piece of eighteen inches from each coupon, was tested on machines of similar build, but by different persons at two different places, A and B:

	Number of tests, 142. Tensile strength.		Number of tests, 140. Elongation in eight-inch specimen.	
Pounds per square inch higher at A.	Per cent. of number of tests higher at A.		Per cent. of elongation higher at A.	Per cent. of number of tests higher at A.
1,000 pds. and less	30.8		1	30.8
2,000 " " "	26.7		2	10.3
3,000 " " "	10.8		3	10.7
4,000 " " "	6.2		4	10.0
5,000 " " "	3.5		5	0.8
6,000 " " "	1.4		6	0.5
7,000 " " "	1.4		7	0.2
8,000 " " "	2.1		8	0.1
9,000 " " "	...		9	0.1
10,000 " " "	1.4			
Total per cent. hgher.	84.3	Total per cent. higher.		63.5

In the above table are given the results of tests of boiler steel at two different places. Allowing for some error in the two machines and a certain difference in quality of the steel in different portions of the coupon, yet the results clearly point to some radical difference in method. This is proved by the tests on machine A being high both in strength and elongation.

Now this is a serious matter, unjust to both the manufacturer and consumer alike. It is evident that the personal equation of the operator, or operators, and the manner of preparing test pieces has something to do with such a showing. Fortunately the margin of acceptance is often sufficiently great to cover the larger part of such discrepancies. But this is no excuse for their existence.

One reason for this state of things is probably the lack of technical training of many of the operators who are charged with the duties of commercial testing. The work is often done in a purely mechanical way without any reference to the properties, or qualities, of the material tested. The influence of the method of preparing test pieces by slotting, milling, turning, or planing is not always understood. Too often the idea prevails that the main object of the operator is to break the largest number of test pieces in the shortest possible time.

As far as the want of technical knowledge is concerned we have no right to blame the young men who do the testing, as long as we do not provide schools where the necessary rudiments of technical knowledge may be acquired. In this respect we are far behind the times.

It would be not only a relief to the engineer, but also to the manufacturer if the American Section of the International Association for Testing Materials would, or could, bring about a uniformity in the methods of preparing test pieces, of the speed at which different classes of materials ought to be tested, of the manner and means by which the elongation and dimensions of test pieces are measured. It may be news to some of those present, but it seems to be an established fact that, for instance, violent jarring of the test pieces while milling them, may affect the results, if such test pieces are tested immediately after milling; just the same as the results are different of material tested the day it was rolled, or hammered, or the same material tested a few days after finishing. It is thus seen that there are great possibilities for reform in the line of commercial testing and inspecting.

In reply to a question Mr. Kreuzpointner stated that the party that obtained the highest elongation obtained also the highest tensile strength. Mr. Kreuzpointner also stated that the pulling speeds were the same in both cases.

Mr. Henning stated that Professor Martens had found in calibrating a machine originally correct, a variation of over sixteen per cent. This was due to changes produced by use.

Mr. McLeod stated that he had found great carelessness in the manner of placing test specimens in the machines. He had seen specimens in testing machines where the free surface was less than four inches.

Miscellaneous Business.

The Secretary announced that the Carbon Iron Company extended a cordial invitation to the members and guests of the American Section to visit their works on Wednesday at any time between 7 A.M. and 5 P.M.

Professor R. A. Fessenden, Secretary of the Engineers' Society of Western Pennsylvania, gave a ten-minute talk on the method of calculating the tensile strength of materials from their atomic weights and electric properties.

The second session adjourned at 10.30 P.M. An informal reception by the officers and members of the Engineers' Society of Western Pennsylvania closed the evening.

THIRD SESSION.

The final session was called to order at 10.20 A.M. on Wednesday, August 16.

Reports of Committees.

Professor William K. Hatt, Chairman of the American Committee A, on the present state of knowledge of Impact Tests presented a preliminary report. This is published in full in Bulletin No. 5. The report was discussed by Messrs. Marburg, Talbot, Kreuzpointner, McLeod, Henning, Thackaray, Osborn and others. It was thought desirable to publish the report of the Committee on Impact Tests in full.

The list of committees was then called, and several presented verbal reports of progress. Some of the committees had hardly commenced their work owing to the lack of instructions from the European chairmen, or to lack of organization.

Committee No. 2, on uniformity of individual shipments of iron and steel, reported that no organization had been effected but that individual members had collected data, and that there was urgent need of certain experimental work.

Committee No. 5, on standard piece tests, reported that a circular letter had been sent out, and that specifications had been collected.

Committee No. 8, on the constancy of volume of hydraulic cements, reported that work had been started and that probably chemical tests would be found necessary.

Committee No. 10, on the adhesive qualities of hydraulic cements, reported that several meetings had been held and that work was in progress.

Publication and Research Fund.

Professor James M. Porter stated he thought that the Association should publish a Journal and that he had several plans to suggest, the first was to solicit contributions from manufacturing companies and others. Second, to form a company for the publication, and third to defray the expenses by an increase in the dues. Of the different schemes the first seemed to be the most promising.

There was a general sentiment in favor of the scheme. Prof. Marburg moved that it be referred to the Executive Committee, with instructions to report at the next annual meeting.

The Secretary stated that he thought this would unnecessarily delay the project, as there would be need for some means by which the reports of the various committees could be printed and sent to the members in advance of the annual meet-

ing. It was very desirable to have them printed in advance, so as to enable the members to prepare their discussions. He, therefore, thought it advantageous to have it started at once.

After considerable discussion of the subject, it was decided to establish a Publication and Research Fund, and the matter was referred to the Executive Committee with full power to act, and requesting them to endeavor to see whether the necessary money could not be raised by contributions.

Mr. Robert A. Carter, President of the Monongahela Iron and Steel Company, stated that he had been very much interested in the work of the Association and particularly in the present project: Further, that his deep interest prompted him to come forward with a contribution of $100. On motion a vote of thanks was given to Mr. Carter.

The Secretary announced that Professor James M. Porter had also subscribed $100 towards this fund, and on motion Professor Porter was given a vote of thanks.

Representatives of two steel companies announced that the Publication and Research Fund would undoubtedly receive the support of their firms as well as that of manufacturers in general.

Adjournment.

Mr. Kreuzpointner moved that a vote of thanks be given to Dr. Moldenke and to other members of the local committee for their labors in arranging for the comfort and entertainment of the American Section, as these had contributed so much to the success of the meeting.

A vote of thanks was also extended to the officers and members of the Engineers' Society of Western Pennsylvania for the courtesies extended to the American Section.

At 12.05 P.M. there being no further business, the chairman congratulated the members on the success of their discussions and deliberations, and declared the second annual meeting adjourned.

Inspection Visit.

The afternoon of August 16 was occupied by visits to the Pittsburg Testing Laboratory, to the Westinghouse Electric and Mfg. Co., at East Pittsburg, and to other industrial establishments.

MEETING OF EXECUTIVE COMMITTEE, AUGUST 16, 1899.

A meeting of the Executive Committee of the American Section of the International Association for Testing Materials was held at the Monongahela House, Pittsburg, Pa., on Wednesday, August 16th, 1899, at 6.30 P.M. There were present Messrs. Merriman, Kreuzpointner, and Humphrey.

W. E. Goldsborough and John A. Capp were appointed members of the American Committee E "On the Investigation of the Magnetic Properties of Iron and Steel."

It was decided to constitute a Publication Committee to have entire charge of the preparation and publication of the Bulletins of the American Section. Mansfield Merriman, Richard L. Humphrey, and James M. Porter were appointed as that committee.

The Publication Committee was requested to issue, as soon as practicable, bulletins containing the Proceedings of the Second Annual Meeting.

James Christie and John McLeod were appointed to audit the accounts of the Secretary and Treasurer at the close of the present year.

MEETING OF EXECUTIVE COMMITTEE, OCTOBER 21, 1899.

A meeting of the Executive Committee was held at the Engineers' Club, Philadelphia, Pa., on Saturday, October 21, 1899, at 3.30 P.M. There were present Messrs. Merriman, Henning, Kreuzpointner, and Humphrey. A letter was read from Vice-chairman Howe regretting his inability to be present.

The minutes of the last meeting were read and approved.

PUBLICATION AND RESEARCH FUND.

The Treasurer reported that the following contributions to the Publication and Research Fund had been received by him:

Logan Iron and Steel Company	$ 20.00
Central Iron and Steel Company	50.00
Carbon Steel Company	50.00
Standard Steel Company	25.00
Wayne Iron and Steel Company	50.00
Robert A. Carter	100.00
James M. Porter	100.00
Total	$395.00

He also reported that the Shoenberger Steel Company, now the American Steel and Wire Company, had promised to subscribe later.

On motion it was unanimously agreed to extend a vote of thanks to each of these contributors.

The chairman reported on behalf of the Publication Committee that Bulletins Nos. 4 and 5 were in press and would be issued shortly. Bulletin No. 4 will contain the address of the chairman delivered at the second annual meeting and Bulletin No. 5 will contain the report of the Committee on Impact Tests. These will be followed by Bulletin No. 6 which will contain the proceedings of the second annual meeting and of the meetings of the Executive Committee.

Rules of the Executive Committee

The chairman called the attention of the committee to the desirability of formulating rules for the conduct of the business of the American Section. He proposed a series of rules, which, after discussion and amendment, were adopted as follows:

(1) Regular meetings of the Executive Committee shall be held on the first Saturday after the first Friday in January, April, July, and October. At each meeting the Secretary shall report the names of all members whose dues are unpaid and the names of all new members added during the previous quarter. The Treasurer shall present a financial statement at each meeting, and the auditors shall report at the January meeting. Special meetings of the Executive Committee may be held at any time on one week's notice by the chairman.

(2) On the last day of March, June, September, and December, the Secretary shall furnish the Publication Committee with the names and addresses of all new members, and also with all changes in addresses of members. The names and addresses of new members shall also be sent to the American Member of the International Council, together with their application blanks.

(3) On the last day of March, June, September, and December the Secretary shall transmit to the Treasurer a statement of all moneys received and paid out during the quarter and pay over to him the balance then on hand. All money paid out shall be vouched for by receipts, and such receipts must bear the certification of the chairman. The statement of dues received during the quarter shall be accompanied by the names of the members paying the same.

(4) The Treasurer shall keep two accounts, one to be called the General Fund, and the other the Publication and Research Fund. Within five days after the first day of January, April, July, and October, he shall transmit to the International Association $1.50 for each member whose dues were paid in the previous quarter together with the names of those members.

No other expenses shall be paid out of the General Fund except on vouchers certified to be correct by the chairman and Secretary. Payments shall be made out of the Publication and Research Fund only on vouchers certified to be correct by two members of the Publication Committee, except by special order of the Executive Committee.

(5) Three-fifths of the general expenses of the Secretary's office shall be charged to the International Association for Testing Materials, and shall be collected by the Treasurer.

Plans for the Third Annual Meeting.

It was decided to provisionally appoint the third annual meeting to be held in New York City between June 20th and June 30th, 1900, the assignment of the exact date being deferred until the meeting of the Executive Committee in January, 1900.

The Executive Committee then discussed matters relating to International Committee No. 1 with Mr. Webster and Mr. Christie, members of that committee.

Mr. Webster, chairman of the American members of this committee, stated that a full report would probably be made at the third annual meeting. He also stated that the American Society of Mechanical Engineers had a committee which had worked on similar lines and he thought the conclusions of the two committees should be harmonized; he, therefore, requested the Executive Committee to formulate some plan for cooperation.

After considerable discussion the following resolution was adopted:

Resolved: That Committee No. 1 be instructed to seek the cooperation of the Committee on Tests and Methods of Testing Materials of the American Society of Mechanical Engineers.

It was also decided that all committees should present reports at the third annual meeting, and, after discussion, the following resolution was passed:

Resolved: That all committees are required to make reports at the third annual meeting and that they are requested to hand these reports to the Publication Committee before May 1st, so that they can be printed and issued by June 1st, 1900.

Exposition Congress of 1900.

Mr. Henning, the American Member of the International Council, presented a report of that Council, held at Dresden, Germany, on Sept. 25-26, 1899, at which he was present. He stated that the resolutions adopted by the Council would be translated into English and a copy be sent by him to each member of

the American Section. The following is a synopsis of those resolutions:

(1) The Council accepts the invitation of the authorities of the French Exposition Congress on Testing Materials which is to be held in Paris on July 9-15, 1900. Members are requested to cooperate with that Congress in furnishing papers and discussions.

(2) The Congress of the International Association for Testing Materials is postponed until 1901, or 1902 at the latest.

Mr. Henning also reported he had taken up the question of the complaints of American subscribers to the "Baumaterialienkunde" and that the officers of the International Association and the editor of this journal had promised to correct the trouble.

LIST OF MEMBERS.

ADDITIONS.

Date of membership.

GRAVES, EDWIN S., Civil Engineer, Aug. 1899
Chief Engineer, Connecticut River Bridge and Highway District, 650 Main Street, Hartford, Connecticut.

KINKEAD, J. F., Inspecting Engineer, Aug. 1899
Inspector, Chicago and Northwestern Railway Company, 507 Smithfield Street, Pittsburg, Pa.

MARCH, H. J., Civil Engineer, Aug. 1899
Assistant Engineer, Department of Public Works, 13 City Hall, Buffalo, N. Y.

STILLMAN, THOMAS B., Chemist, Sept. 1899
Professor of Analytical Chemistry, Stevens Institute of Technology, Hoboken, New Jersey.

CHANGE OF ADDRESS.

JOHNSON, J. B., Civil Engineer,
Dean of College of Mechanics and Engineering, University of Wisconsin, Madison, Wis.

ANNOUNCEMENT
OF THE
PUBLICATION COMMITTEE.

Attention is called to the list of contributions to the Publication and Research Fund given on page 67. This fund now amounts to $395. Corporations or persons desiring to subscribe to it are invited to send their contributions to the Treasurer of the American Section, Paul Kreuzpointner, Pa. R. R. Testing Laboratory, Altoona, Pa. Information in regard to the objects of the Association will be given by him or by the undersigned.

The attention of members of all Technical Committees is called to the resolution adopted by the Executive Committee on October 21, which is given on page 69. In accordance with that resolution all committees are notified that their reports for the Third Annual Meeting should be sent to the Chairman of the Publication Committee on or before May 1, 1900, in order that they may be printed and distributed at least three weeks before the annual meeting.

MANSFIELD MERRIMAN,
Lehigh University, South Bethlehem, Pa.

RICHARD L. HUMPHREY,
City Hall, Philadelphia, Pa.

JAMES M. PORTER,
Lafayette College, Easton, Pa.

Publication Committee.